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ADOPTION OF THE REPORT OF THE COMMITTEE

Draft report

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Chapter __

SUBSTANTIVE THEME: WAYS AND MEANS OF ENSURING THE PARTICIPATION OF DEVELOPING COUNTRIES IN INTERNATIONAL COOPERATION FOR RESEARCH ON AND DEVELOPMENT OF ENVIRONMENTALLY SOUND TECHNOLOGIES, AND THE RAPID AND EFFECTIVE TRANSFER OF SUCH TECHNOLOGIES TO THE DEVELOPING COUNTRIES

(Agenda item 3)

1. The Officer-in-charge of the Centre for Science and Technology for Development introduced the report of the Secretary-General on the ways and means of ensuring the participation of developing countries in international cooperation for research on and development of environmentally sound technologies, and the rapid and effective transfer of such technologies to the developing countries (A/CN.11/1991/2) and stated that science and technology, which had become more important than ever, were indispensable components of the response to the wide range of environmental challenges. The United Nations had a continuing role to play in mobilizing the potential of science and technology for development. It was not an easy task, and perhaps for that reason, the Organization had often been criticized for the manner in which it had addressed the problem.

2. He emphasized that the transfer of environmentally sound technologies to developing countries on preferential terms and the building of capacities for the effective application of such technologies was vital for achieving sustainable development in those countries. It was necessary to identify creative mechanisms and operational methods to accelerate such transfer and enhance the capacities to manage environmentally sound technologies in developing countries, including financing.

3. He also introduced a background document entitled "Environmentally sound technology assessment (ESTA)".

4. The representative of Ghana, speaking on behalf of the Group of 77, stated that the world was in the last decade of a century that had seen the most technological development in history. One would have thought that the achievements in technological innovations and development which had taken place in the developed North would have been brought within easy reach of the developing countries. It was tragically ironic that the developing countries had not been able to benefit from that development. The result had been a widening gap between the developed and most of the developing countries. The Group of 77 attached enormous importance to the subject of science and technology for development and that was reflected in its national social and economic development planning.

5. In an era in which the issues of accessibility to and affordability of environmentally sound technologies had become very important globally, it was important to make a concerted effort to ease the burdens of developing countries in those areas in order to ensure human survival. He lamented the fact that serious efforts made by the Group of 77 within the United Nations and other international forums had not been rewarded by significant progress in creating conditions for a more rapid development of science and technology in developing countries. The classic concept of technology transfer, predicated on the use of multilateral agencies and bilateral donors, had not been able to fulfil the task. The Group of 77, however, wished to emphasize that international support was still essential to the efforts of the developing countries to strengthen the processes of their scientific and technological development.

6. The Group of 77 reaffirmed the validity of the Vienna Programme of Action on Science and Technology for Development 1/ and the relevance of the three basic goals for the development of developing countries, namely, to strengthen the endogenous capacity of developing countries, restructure international science and technology relations and strengthen the role of the United Nations system. In addition, the Group of 77 would like to see international scientific and technological cooperation that inspired trust and confidence, full access to scientific and technological knowledge, unimpeded transfer of technology on terms that were non-exploitative, a harmonized United Nations policy on science and technology and the setting up of financial mechanisms to provide the necessary resources to ensure meaningful implementation of the Vienna Programme of Action. He reiterated the call made at the Special Ministerial Meeting of the Group of 77 in June 1989 for the need to continue

to strengthen and expand the human resources base of developing countries. The Group of 77 appreciated the work of the Intergovernmental Committee, which it saw as an important forum for the growth and development of science and technology. He also called for special attention to be paid to the needs of the least developed countries.

7. A number of representatives commended the Intergovernmental Committee for its foresight in the selection of the substantive theme since it would serve as a significant contribution to the preparatory process of the 1992 United Nations Conference on Environment and Development. Two of the most important and delicate topics to be discussed during the Conference would be the transfer of environmentally sound technologies and financial resources to developing countries. The reports of the Secretary-General on those subjects were considered as comprehensive and highly analytical by many representatives; they not only elaborated the various difficulties and problems confronting the developing countries in their efforts to participate in international cooperation on research and development of environmentally sound technologies and in the rapid and effective transfer of such technologies to developing countries but also envisaged some preliminary solutions. The reports, in conjunction with the background document on environmentally sound technology assessment (ESTA), would serve as a significant contribution to the preparation of the 1992 United Nations Conference on Environment and Development. The representatives of two developing countries encouraged the Centre for Science and Technology for Development to continue its work in the area of the assessment of environmentally sound technologies as an important contribution to the implementation of the Vienna Programme of Action.

8. Many representatives endorsed the observations made in the report of the Secretary-General on the substantive theme that the global dimension of environmental and development challenge called for concerted action on a wide front. It required an increased solidarity among all nations and the political will of all countries in order to face the complex task which lay ahead for the community of States. There was no doubt that the key issue of the technological development of developing countries was central to the world community's endeavour to successfully meet the challenge of environmentally sound and sustainable development at national, regional and global levels. The representative of a developing country stressed the need for a clean environment as a guiding principle which should not be used to infringe on the sovereign rights of States or impose new conditions in aid and trade.

9. Many representatives from developing countries emphasized the need to look specifically at developing countries' environmental problems. Those concerns were inextricably linked to the larger question of global environmental impoverishment but had not received the kind of serious efforts that were needed to ensure the cooperation of developing countries in international attempts to achieve global sustainable development. The representative of a developing country recommended that global environmental questions should not overshadow the gravity of local environmental problems, such as desertification and drought. Both global and local environmental issues should be kept in mind when addressing the question of access and

transfer of environmentally sound technologies. The representative of a developing country argued that the effects of environmental degradation had no boundaries and that it was the common responsibility of humanity to use all the knowledge and technologies available to halt the current process of environmental destruction. He stressed that in a matter of such urgency, it would be immoral to withhold technologies capable of reversing current trends due to either political, ideological or proprietary reasons.

10. Several representatives from developed and developing countries expressed the urgent need for international cooperation in support of the national priorities and plans of developing countries to strengthen their capacities to develop and effectively apply environmentally sound technologies. In that regard, the representatives emphasized that the building of endogenous capacity in developed countries was just as significant as making environmentally sound technologies available on the market.

11. The representative of an island developing country drew the attention of the Intergovernmental Committee to the specific situation of small island-developing countries with regard to the need to build up a critical mass in science and technology to respond effectively to their national needs and international obligations. Attempting to build on a resource-poor base, and lacking the established scientific and technological infrastructures, such as universities and research and development institutions that had been identified as essential prerequisites for endogenous capacity-building in science and technology, placed the small island developing countries at risk of exclusion from the so-called "age of information technology". A programme of action tailored specifically to the unique requirements of small island developing countries was needed that would combine an innovative approach focused on participatory, people-oriented, sustainable development targeted to making science and technology a dynamic and integral part of their development processes.

12. The representative of a developed country stated that effective technology transfer involved more than simply moving products and industrial processes. As the documentation on the substantive theme pointed out, it required the transfer of knowledge needed to create and manage processes and products. In order to build up the necessary knowledge, appropriate conditions must exist in the receiving country. The transfer of technology had to be seen from a longer term and wider perspective, where investments in capacity-building and human resources development were central elements, particularly with regard to the need to develop, adapt and apply technologies tailored to the specific conditions and requirements of developing countries. There must be sufficient means available to finance effective demand; there must be environmental policies in place, and research and education system capable of receiving, adapting and developing applications of new knowledge. He stated that while market mechanisms could provide significant technology transfers, they were inadequate in fully satisfying demand and equity objectives and might not be effective in some countries. Thus, the role of the public sector was essential.

13. The representative of a developing country saw an effective way to circumvent the difficulties faced by developing countries in gaining access to proprietary technologies through public financing of the costs of such transfer or through the establishment of financial mechanisms under public control. Due to the lack of resources by developing countries, such mechanisms would necessarily be of international scope, either bilateral or multilateral. Those efforts should be complemented by market mechanisms.

14. Many representatives pointed out that one of the major obstacles to the transfer of environmentally sound technologies had been their high cost coupled with the financial weakness of developing countries. While there was no absolute scarcity of resources, some argued, developed countries had not shown the political will to redirect available resources to promote development and to preserve the environment in developing countries. In that context, the representative of a developing country stated that developed countries should transfer environmentally sound technologies to developing countries on concessional and favourable terms to compensate for the economic losses on the part of developing countries as a result of environmental protection measures that would need to be put in place. They encouraged the establishment of special funds with new and additional resources to finance the transfer of environmentally sound technologies. It was also suggested that funding arrangements established under the Montreal Protocol could serve as a guide for the establishment of a funding mechanism for that purpose.

15. Many representatives from developing and developed countries agreed that to facilitate technology transfer to developing countries, it was necessary to define mechanisms aimed at increasing investments of both the private and public sectors by improving access to markets, developing research and development activities, facilitating access to patents and building up endogenous capacity in the area of science and technology. Those mechanisms should combine different elements, such as internal policies, innovative forms of partnerships between enterprises of developing and developed countries, enhancement of the scientific and technological cooperation between Governments and a more effective role by international agencies and non-governmental organizations.

16. Proposals were also made with regard to environmental protection measures. The representative of a developed country proposed the creation of disincentives in the case of the transfer of outdated and pollution-generating technologies. In that connection, he stated that consideration should be given to the disclosure practices of private enterprises with regard to environmental impact and risk assessment related to particular technologies.

17. The representative of a developed country supported the view expressed in the report of the Secretary-General that national patent systems significantly affected the transfer and application of environmentally sound technologies. He stressed the need, however, for providing appropriate protection for intellectual property rights and emphasized that real technology transfer occurred as the result of close entrepreneurial cooperation. His Government, he stated, had committed approximately $US 2.2 billion in bilateral and

multilateral assistance in the field for the period 1989-1991. He also informed the Committee about the formation of the Keidanren Global Environment Charter, a federation of economic organizations in Japan. The charter provided guidelines in the area of environmental protection to be applied by Japanese companies and their subsidiaries. The representative of a developing country expressed the need for a regime concerning the protection of intellectual property that would legitimize international diffusion of environmentally sound technologies. A number of representatives gave specific attention to the role of the private and public sectors, especially with regard to their responsibility and potential to take action to improve the transfer of technologies to developing countries. The representative of a developing country underlined the need to take steps to develop technologies in the public domain through subsidies by developed countries, differential pricing policies by commercial enterprises and by limiting the life of environmental patents while providing a time waiver to developing countries so that their obligations under relevant international agreements would come into effect only after the life of the patents.

18. Many representatives referred to the importance of having access to information on environmentally sound technologies and the capacity to make effective use of such information. In that context, they pointed out that the lack of updated information on available environmentally sound technologies clearly hampered the dissemination of those technologies which were readily available. Several representatives supported the need for establishing an international database which would provide information not only on environmentally sound technologies but also on the world's distribution of technologies that were environmentally damaging. The database should take into account the implications of intellectual property rights.

19. Several representatives stated that developing countries had been unable to participate in research and development projects on environmentally sound technologies because they had first to deal with priorities covering the basic needs of their citizens. Many representatives stressed the importance of promoting partnerships in research on and development of environmentally sound technologies between developed and developing countries which were geared to development rather than solely to market strategies. They fully endorsed the observations made in the report regarding that issue, particularly with the view that multilateral cooperation had the advantage of bringing weaker and poorer partners in contact with the international scientific and technological community.

20. Many representatives pointed to the important suggestions contained in the report regarding the establishment of a collaborative network of international research centres on environmentally sound technologies. Such a network should primarily be based on existing regional research, development and demonstration centres, which must be strengthened. Those regional centres should be linked to national institutions.

21. In the context of regional cooperation in research and development, the representative of a Latin American country informed the Intergovernmental

Committee about an initiative known as the Bolivar programme, aimed at a regional strategy of technological innovation to foster the integration and industrial competitiveness of Latin American and Caribbean countries in an environmental context. Such a programme would promote scientific, technological and industrial cooperation among business enterprises and research centres of the region with the objective of increasing the productivity and competitiveness of industries and national economies.

22. The representative of the Netherlands, speaking on behalf of the European Community and its member States, thanked the Centre for Science and Technology for Development for its comprehensive report on the substantive theme. He emphasized the importance of the "think globally and act locally" approach which had, so far, perhaps been more relevant for the developed part of the world, including Eastern Europe. Technology applications could not only have a minimum global adverse environmental effect but also even a beneficial effect on the global environment. Attention should also be given to promoting the use of technologies aimed at protecting the local environment.

23. Commenting further on the report of the Secretary-General, he noted that it disregarded any possibility of tapping internal financial resources. However, not all of the developing countries were facing such a situation, since a re-ordering of budget priorities in some of those countries could achieve improvements in their financial situations. The European Community and its member States fully subscribed to the need to mobilize additional financing support from the international community for that purpose.

24. He also stated that regulations on the export of environmentally damaging technologies must avoid a system of double standards, with different criteria used for the domestic application on the one side and the exportation of such technologies on the other. The responsibility of the international business community and recipient countries concerning such regulations had been emphasized by the World Industrial Conference on Environmental Management and by the Business Council for Sustainable Development. He raised doubts with regard to the usefulness of establishing yet another data bank, as had been proposed by representatives of other countries, given the existing databases operated by the United Nations Environment Programme (UNEP). He also raised the question as to what extent international property rights could be considered as a barrier to technology transfer, as stated in the report.

25. With regard to the substantive theme for the twelfth session of the Intergovernmental Committee in 1993, three proposals were made during the debate, namely, "Ways and means for implementing the decisions of United Nations Conference on Environment and Development in the field of science and technology", "Science and technology for the integration and industrial competitiveness of the developing regions" and "Technology assessment in conversion of military technology for developmental purposes".

26. The representative of the United Nations Educational, Scientific and Cultural Organization (UNESCO) emphasized the importance of access to new knowledge and added that owners of new technologies often dictated the rules

of the game. For science to be universal, the international community should propose solutions which would satisfy all countries. Additionally, he underlined the need to strengthen networking schemes in the regions and promote centres of excellence in South-South and North-South cooperation, to promote basic research in various ecologically related fields and to develop national higher education and training systems in science and technology.

27. The representative of the International Labour Organization (ILO) noted that the understanding of the relationships between development and environment remained in the state of infancy; policy experiences were limited, and the empirical evidence was being confined largely to the countries of the Organisation for Economic Cooperation and Development (OECD). He proposed that if the use of natural resources was to be sustained in the long run, preference should be given to those policy measures which rely on market incentives. He raised the question regarding the kind of policies needed to prevent adverse employment effects due to environmental degradation such as involuntary migration through soil degradation and erosion, deforestation and desertification.

28. In his statement, the representative of the Economic Commission for Africa referred to the serious social and economic problems facing the African region which affected the incorporation of the issue of environmental protection into development policies. The major concern of the African countries at the moment was to find ways and means to survive using whatever technology they could lay their hands on and which they could afford. He stressed the need to strengthen the local infrastructure, including the research and development sector, in order to improve the possibilities for technology application and to avoid "brain drain". He emphasized that research and development cooperation in the African region had to make use of existing mechanisms and institutions for such cooperation. He outlined basic features for the participation of African countries in international cooperation for research on and development of environmentally sound technologies and the effective transfer of such technologies to African countries.

29. The representative of the Economic and Social Commission for Asia and the Pacific (ESCAP) said that he supported the thrust of the views in the Secretary-General's report. They served as a practical base for future development. In the ESCAP region, the biophysical environment continued to deteriorate while the political situation had improved. The population was increasing, and the majority of the people continued to depend directly on the environment for their livelihood. Accordingly, the rapid depletion of the environment was a source of serious concern.

30. The economic growth of the region had exceeded that of any of the other developing regions of the world. A significant portion of that growth was due to rapid industrialization. That growth had produced a number of environmental problems, including a higher rate of air pollution and a reduced capacity to deal with it. If future generations were to enjoy a better quality of life, it was necessary to institute effective methods to conserve

the environment and reverse the degradation that had already occurred while pursuing economic growth and development.

31. Environmental technologies to deal with certain local problems were available but required large financial resources. Appropriate technology was woefully lacking in many developing countries. They should be provided with information about what was available, at what cost and where.

32. The representative of the International Technical Associations said his organization was a non-governmental body consisting of 26 international technical associations. During the past year, the Union had formed a joint executive committee with the World Federation of Engineering Organizations to consider eco-technological programmes for protecting the environment and mitigating the effects of natural hazards. They gave particular attention to enhancing the engineering contributions to the International Decade for Natural Disaster Reduction (1990s). 2/

33. Partnerships in carrying out programmes highlighted in the report were valuable. The proposed network of international research centres could lead to a world-wide network of such centres, which might be known as the consultative group on international research on environmentally sound technologies. That idea should be given serious encouragement, as the engineering and technical communities could be valuable partners.

34. The representative of the International Association for Impact Assessment, a non-governmental organization, stressed the importance of applying the methodology of impact assessment, including technological forecasting and monitoring, backed by impact evaluation, in order to project not only the most probable but also the most desirable future. That was a "value-added" process, requiring the active participation of decision makers and the public alike. The Association had been founded in 1981 to bring together researchers, practitioners and users of technology, environmental impact, social impact and risk assessment and other specializations.

Notes

1/ See Report of the United Nations Conference on Science and Technology for Development, Vienna, 20-31 August 1979 (United Nations publication, Sales No. E.79.I.21 and corrigenda), chap. VII.

2/ General Assembly resolution 44/236.